



सरदार वल्लभभाईराष्ट्रीय प्रौद्योगिकी संस्थान, सूरत
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF
TECHNOLOGY, SURAT
विधुत इंजीनियरिंगविभाग
DEPARTMENT OF ELECTRICAL ENGINEERING

SVNIT

No. EED/ APG / 2231 / 2021-22

Date: 16/02/2022

To,

Sub: Enquiry for Supply of "AC clamp power meter with Harmonics Measurement" for academic and research purpose.

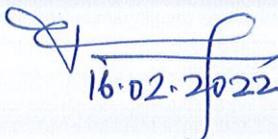
Dear Sir,

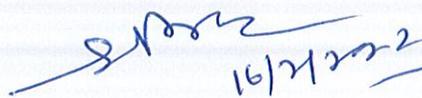
You are requested to quote your prices for supply of stores listed overleaf. The quotations may be sent to the undersigned in a sealed envelope and subscribed as: "Quotation with reference to Enquiry No. EED/APG / 2231 / 2021-22, dated: 16/02/2022". Your quotation should reach the undersigned on or before **07/03/2022 at 5:00 PM.**

The quotations should be furnished with the following information.

1. The brand or make of each item should be specifically stated and wherever Necessary, Complete set of specifications and dimensions should be given.
2. If asked, samples are accompany the quotations or provide demonstration in the Department at any stage of purchase without claiming any financial benefits.
3. Sales tax, General tax, Central Sales tax, Custom duty, Insurance charges, Packing and Forwarding charges, if not included in the prices quoted, should be clearly specified.
4. This Special designed experimental setup is used for research purpose. So, concessional rate of GST is applicable.
5. The period of validity of the quotation should be at least 90 Days or more. Offers subject to prior sale may please be avoided.
6. The delivery period is to be clearly mentioned in the quotation.
7. The mode of delivery of the stores may be mentioned. The delivery should be F.O.R. Surat or at the Institute.
8. All concessions available to an educational institution should be specified and also taken into account while quoting.
9. This Institute is located within the limits of S.M.C. & exempted from the paying of Octroi duty on incoming goods from outside limits of S.M.C.
10. This Institute is registered with the dept. of scientific & industrial Research (DSIR) for the purpose of availing custom duty exemption & central excise Duty Exemption, and hence the certificate to this effect will be issued wherever it is necessary on demand.

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11. Payment is normally made by cheque drawn on the S.V.N.I.T. Branch Office of State Bank of India, Surat-395007 within a period of thirty days from the date of receipt of stores. If case of any official delay, any type of claimed extra payment will not be considered.
12. Your Specification & terms-conditions should be as per the format attached, must be on your company letter head & signed by an authorized person.
13. Offered quotation may be rejected if any ambiguity is found in offered specification, terms & conditions supplied by party in specified tabular format.
14. Preference may be given to the supplier having status of authorized dealer of manufacturer, with a view to ensure reliable after sales service for the item.
15. *Attach photograph of quoted item with specifications which is provided by standard manufacturers and it should be available online in authentic manufacturers/company website for verification.*
16. *Attach list of purchase order received from any college/ institute/ company / agency etc for similar type of work. Also attach list of customers with their contact Number for our verification regarding quality of product.*
17. **AC clamp power meter with Harmonics Measurement** will be tested in supplier workshop or manufacturing plant decided by the Department (if required) or demo in department.
18. Need all test report regarding claimed data, response time, download of figures arrangement, connection/ interface with computer and others in the use of actual practice.
19. Finally, Items will be accepted after satisfactory performance in our laboratory according to our requirement in term of response time, value, terms used in measurement, quantity and others.
20. At least three year warranty certificate is compulsory along with quotation as well as invoice of the consignment.
21. The Director reserves the right to accept stores, which are not strictly in confirming with the specifications but otherwise, found suitable.
22. The Head of Department /Director reserves the right to stop the purchase process at any stage.
23. An enquiry may send in the following address within given time period only.

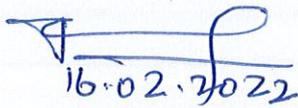
To,

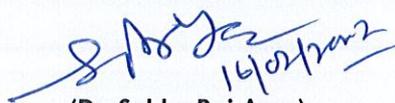
The Director,

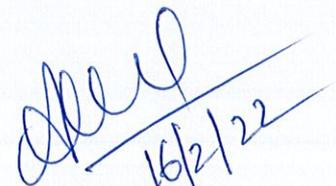
(kind attention, Head Electrical Engineering Department),

Sardar Vallabhbhai National Institute of Technology (SVNIT), Dumas road, Ichhchnath, Surat-395007 (Gujarat)

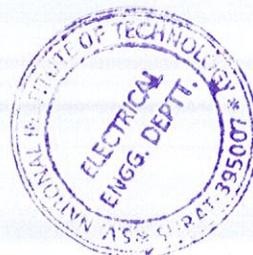
Yours faithfully,


16.02.2022
(Dr. Rakesh Maurya)
Laboratory In-charge


16/02/2022
(Dr. Sabha Raj Arya)
Laboratory In-charge


16/2/22
Head, DoEE

PTO



Price List

Enquiry for Supply of "AC clamp power meter with Harmonics Measurement" for academic and research purpose.

Sr. No.	Name of Item	Specifications	Qty.	Make	Unit cost including all charges (in Rs.) without GST	Total cost (in Rs.)
A.	AC clamp power meter with Harmonics Measurement	Single-phase, balanced Three-phase with normal supply for Voltage, Current, Voltage/ current peak, Active/ reactive/ apparent power, Power factor, Phase angle, Frequency, Voltage/ current harmonic (THD) measurement, voltage range: up to 600.0 V, current: 0.060 A to 600.0 A, Power up to 360.0 kW or more, Harmonics level up to 30 th or more orders etc and other Detailed specification as per Annexure -A	3			
Sub Total (in Rs.)						
GST (in Percentage) _____						
Grand total with GST and others (in Rs.)						

Note: (a) Quote item cost/price including all type of charges and GST as separately.

(b) If required, please add extra pages with quotation and for details related to specification see attached **Annexure-A**.

(c) Agency/distributors/supplier must attach Photograph of above item with data sheet from original manufacturers as per condition Enquiry condition Sr. No. 15. If above items are quoted by Original Manufacturers than also attached Photograph of above item with data sheet. Also attached list of purchase order and list of customer with contact no. as per enquiry condition Sr. No.16.

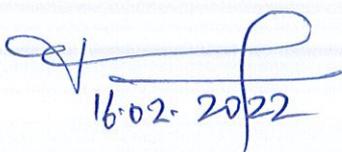
(d) **Quotation will not be considered for further process without Compliance Report in form of ANNEXURE-B and without fulfillment of above point no. (c).**

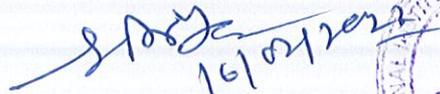
Terms and Conditions

1.	Percentage of GST with certificate for research purpose	
2.	Percentage of GST without certificate for research purpose	
3.	Delivery Period (in month or days)	
4.	Validity of the quotation (in month or days)	
5.	Warranty/Guarantee (THREE YEAR)	
6.	Item Make and model	
7.	Other Terms & conditions	
8.	Submission of Compliance Report in ANNEXURE-B	Yes/ No
9.	Attach documents for fulfillment of above point "c" (in Price List – Note) and Enquiry Sr. No 2, 15, 16, 17, 18, 19 with Proof (if required)	Yes/ No

Date:

Signature and stamp of agency


16.02.2022


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Annexure-A
Detailed Specification

Specification of "AC clamp power meter with Harmonics Measurement" for academic and research work in Advanced Drives Laboratory, EED

Sr. No.	Required specification for AC clamp power meter with harmonics measurement	
1.	Measurement line	Single-phase, Three-phase (balanced with no distortion)
2.	Measurement items	Voltage, Current, Voltage/ current peak, Active/ reactive/ apparent power, Power factor, Phase angle, Frequency, Simple Active Energy Consumption (Single-phase), Voltage/ current harmonic levels, Display update interval 2 times/sec or more times per second ,Response time less than or equal 1 sec, Fundamental frequency 50 Hz/60 Hz, Analysis window width 1 cycle or more, Crest factor 3 or less for different range of current and 1.6 or less for voltage range
3.	AC voltage range	[Measurement range] up to 600.0 V or more in Single range, (resolution :0.1V) within 60 counts
		Basic accuracy 45 - 66 Hz: $\pm 0.7\%$ rdg. ± 3 dgt.
		(Frequency characteristics: 45 to 1 kHz, True RMS)
4.	AC current range	[Measurement range] 0.060 A to 600.0 A or more current , within 120 counts
		3 range, Basic accuracy: $\pm 1.3\%$ rdg. ± 3 dgt. (Frequency characteristics: 45 to 1 kHz, True RMS)
5.	Power range	[Single phase] 0.005 kW to 360.0 kW or equivalent
		Basic accuracy: $\pm 2.0\%$ rdg. ± 7 dgt. Or less (50/ 60 Hz, Power factor=1)
		[Balanced three-phase 3-wire] 0.020 kW to 623.5 kW
		Basic accuracy: $\pm 3.0\%$ rdg. ± 10 dgt. Or less (50/ 60 Hz, Power factor=1)
		[Balanced three-phase 4-wire] 0.040 kW to 1080 kW
6.	Harmonic levels	Voltage/ current harmonic levels up to 30 th or more , Content factor,
		Total Harmonic distortion in current and voltage in terms of percentage value and waveforms etc , Total harmonic distortion ratio
		Need high Accuracy value (write data for value level) Total harmonic distortion ± 1 digit or less for calculations performed using measured values
7.	Other functions	[Phase angle] lead -180.0° to lag 179.9° , [Power factor] -1.000 to 1.000 [Frequency] 45.0 Hz to 999.9 Hz, Peak, Phase detection, Max / Min / Avg value display, Auto hold, shift, maximum/ min facility, electric meter comparison, unbalanced 3-phase power estimate, connection display, etc.
8.	Dustproof and waterproof	IP54 (EN60529) Grip, excluding lever
		Specify about Risk of electric shock from measured conductors increases when wet
9.	Interface	Bluetooth, display measured values or android device or USB etc Antenna power Maximum $+0$ dBm (1 mW) or less, Communications range 10 m or more (line of sight)
10.	Power supply	LR03 Alkaline battery $\times 2$, Continuous use: 25 hr (Backlight OFF) or power supply based

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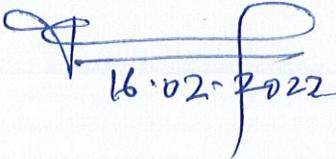
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11.	Core jaw diameter	φ 46 mm (1.81 in) or more
12.	Dimensions and mass	82 mm W × 241 mm H × 37 mm D, 450 g (Approximate or equivalent)
13.	Accessories	Voltage Connection cord/ voltage probes (01 and 01 extra or more), LR03 Alkaline battery (2 or more), Carrying case (1), Instruction manual (1), etc Notice Regarding Equipment That Emits Radio Waves ×1
14.	Others	Single Phase Power Range from 0.005kW with accuracy +-2%rdg +-7dgt Phase angle obtained from zero cross of current / voltage. Electricity theft detection function. Power off facility. Continuous operating Time: more than 22 hours Input impedance: 1 MΩ or greater If asked, show the demo in our Department

Date:

Signature and stamp of agency


16.02.2022


16/2/2022



ANNEXURE-B
Compliance Report submitted by Agency/Original Manufacturers

“AC clamp power meter with Harmonics Measurement” for academic and research work in Advanced Drives Laboratory, EED

Sr. No.	Name of the item: AC clamp power meter with Harmonics Measurement	Estimated value according to standard	Attached data sheet for proof of values or range from Original Manufacturers	Compliance Yes/No
1.	Measurement line	(i)Single-phase, Three-phase (balanced with no distortion)		
2.	Measurement items	(ii)Voltage, Current, Voltage/ current peak, Active/ reactive/ apparent power, Power factor, Phase angle, Frequency, Simple Active Energy Consumption (Single-phase), Voltage/ current harmonic levels		
		(iii)Crest factor 3 or less for different range of currents and 1.6 or less for different voltages range		
		(iv)Display update interval 2 times/sec or more times per second ,Response time less than 1 sec, Fundamental frequency 50 Hz/60 Hz, Analysis window width 1 cycle or more		
3.	AC voltage range	(i) Measurement range: up to 600.0 V or more in Single range, (resolution:0.1V) within 60 counts		
		(ii)Basic accuracy 45 - 66 Hz: $\pm 0.7\%$ rdg. ± 3 dgt.		
		(iii)Frequency characteristics: 45 to 1 kHz, True RMS		
4.	AC current range	(i)Measurement range: 0.060 A to 600.0 A or more current , within 120 counts (ii) 3 range, Basic accuracy: $\pm 1.3\%$ rdg. ± 3 dgt. (Frequency characteristics: 45 to 1 kHz, True RMS)		
5.	Power range	(i)Single phase: 0.005 kW to 360.0 kW or equivalent		
		(ii)Basic accuracy: $\pm 2.0\%$ rdg. ± 7 dgt. Or less (50/ 60 Hz, Power factor=1)		
		(iii) Balanced three-phase 3-wire: 0.020 kW to 623.5 kW		
		(iv) Basic accuracy: $\pm 3.0\%$ rdg. ± 10 dgt. Or less (50/ 60 Hz, Power factor=1)		
		(v) Balanced three-phase 4-wire: 0.040 kW to 1080 kW		
		(vi)Basic accuracy: $\pm 2.0\%$ rdg. ± 3 dgt. (50/ 60 Hz, Power factor=1)		
6.	Harmonic levels	(i)Voltage/ current harmonic levels up to 30 th or more , Content factor,		
		(ii)Total Harmonic distortion in current and voltage in terms of percentage value and waveforms etc,		
		(iii)Total harmonic distortion ratio		
		(iv)Need high Accuracy value (write data for value level)		

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		Total harmonic distortion ± 1 digit or less for calculations performed using measured values			
7.	Other functions	(i) Phase angle lead -180.0° to lag 179.9° , [Power factor] -1.000 to 1.000 [Frequency] 45.0 Hz to 999.9 Hz, Peak, Phase detection, Max / Min / Avg value display, Auto hold, shift, maximum/ min facility, electric meter comparison, unbalanced 3-phase power estimate, connection display, etc.			
8.	Dustproof and waterproof	(i) IP54 (EN60529) Grip, excluding lever (ii) Specify about Risk of electric shock from measured conductors increases when wet			
9.	Interface	(i) Bluetooth, display measured values or android device or USB etc (ii) Antenna power Maximum $+0$ dBm (1 mW) or less, Communications range 10 meter or more (line of sight)			
10.	Power supply	(i) LR03 Alkaline battery $\times 2$, Continuous use: 25 hr (Backlight OFF) or power supply based			
11.	Core jaw diameter	(i) Diameter: $\phi 46$ mm (1.81 in) or more			
12.	Dimensions and mass	(ii) 82 mm (W) $\times 241$ mm (H) $\times 37$ mm (Dia), 450 grams (Approximate or equivalent or more)			
13.	Accessories	(i) Voltage Connection cord/ voltage probes (01 and one extra or more), LR03 Alkaline battery (2 or more), Carrying case (1), Instruction manual (1), etc (ii) Notice Regarding Equipment That Emits Radio Waves $\times 1$			
14.	Others	(i) Single Phase Power Range from 0.005 kW with accuracy $\pm 2\%$ rdg ± 7 dgt (ii) Phase angle obtained from zero cross of current / voltage. Electricity theft detection function. (iii) Power off facility. (iv) Continuous operating Time: more than 22 hours (v) Input impedance: 1 M Ω or greater (vi) If asked, show the demo in our Department (vii) Any other features or advantages			

Date:

Signature and stamp of agency
with contact details

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